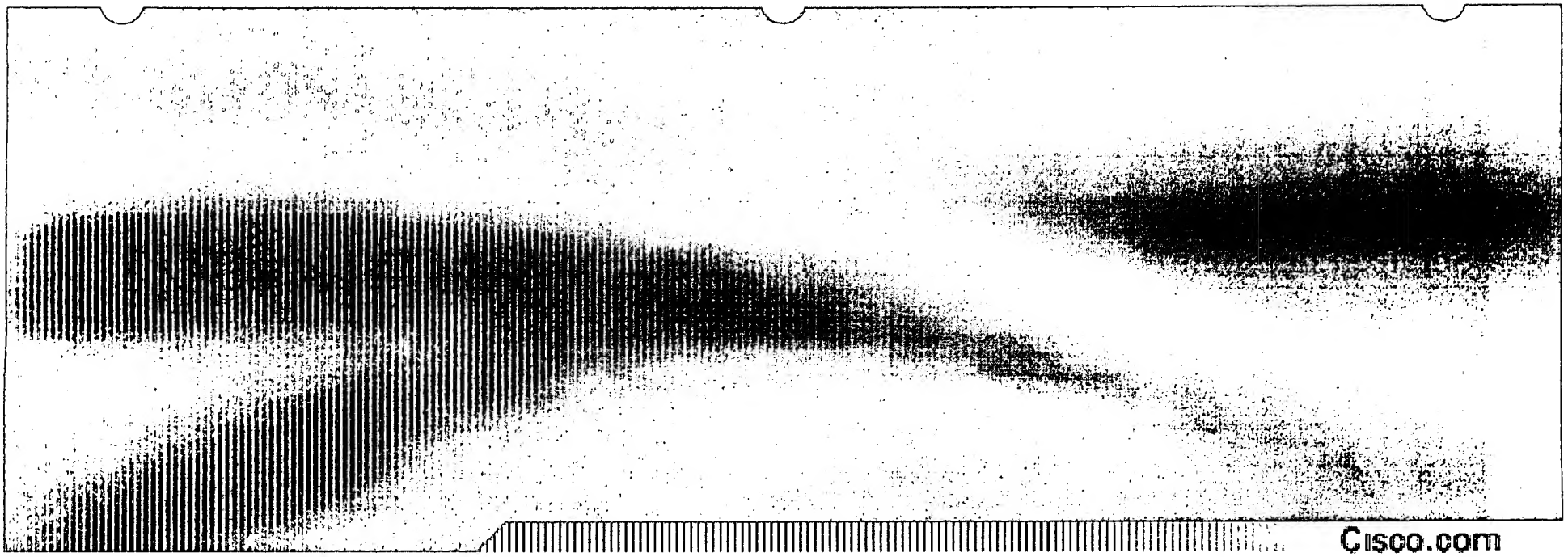

Cisco IP Transfer Point (ITP) Network Management Product Presentation

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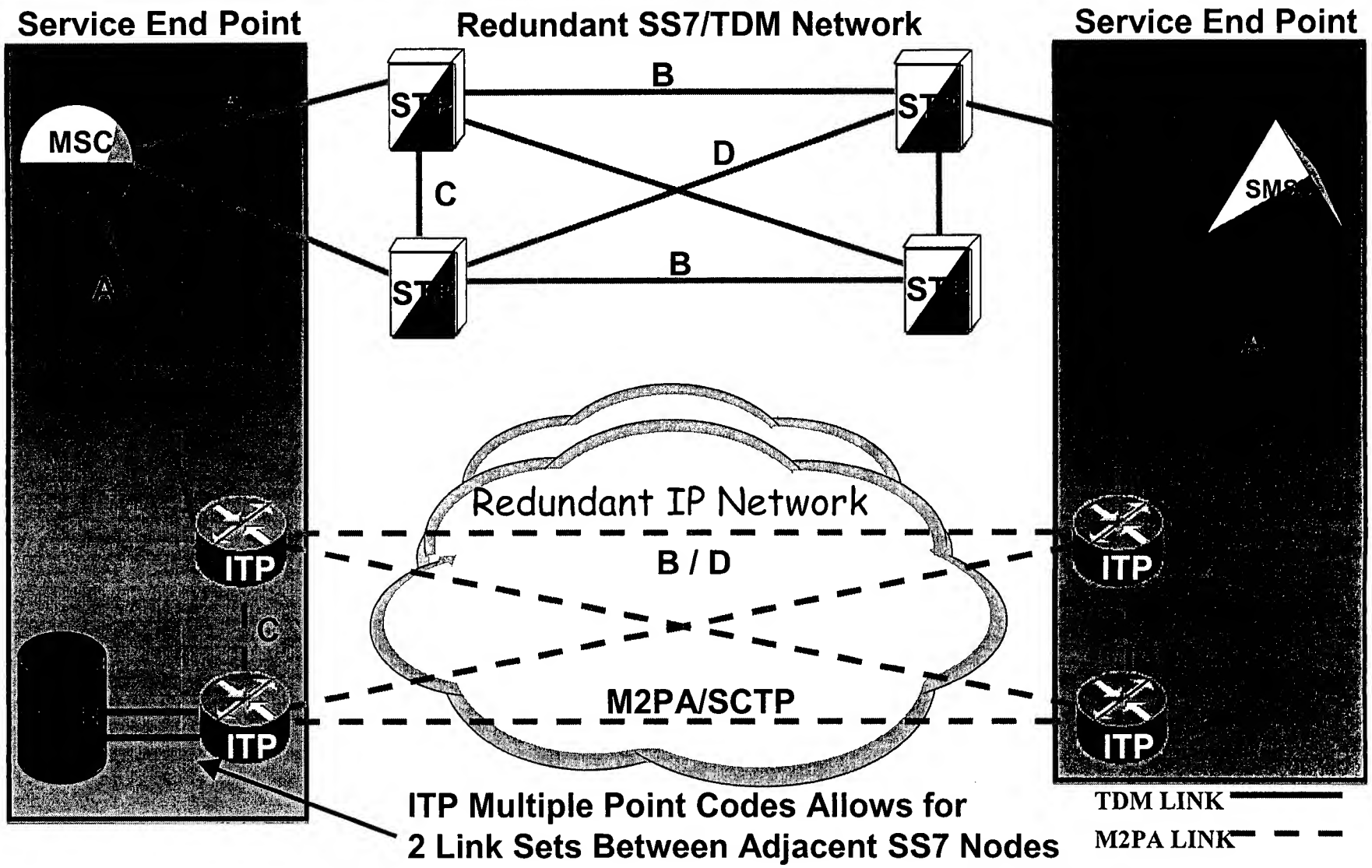
ITP Network Architecture



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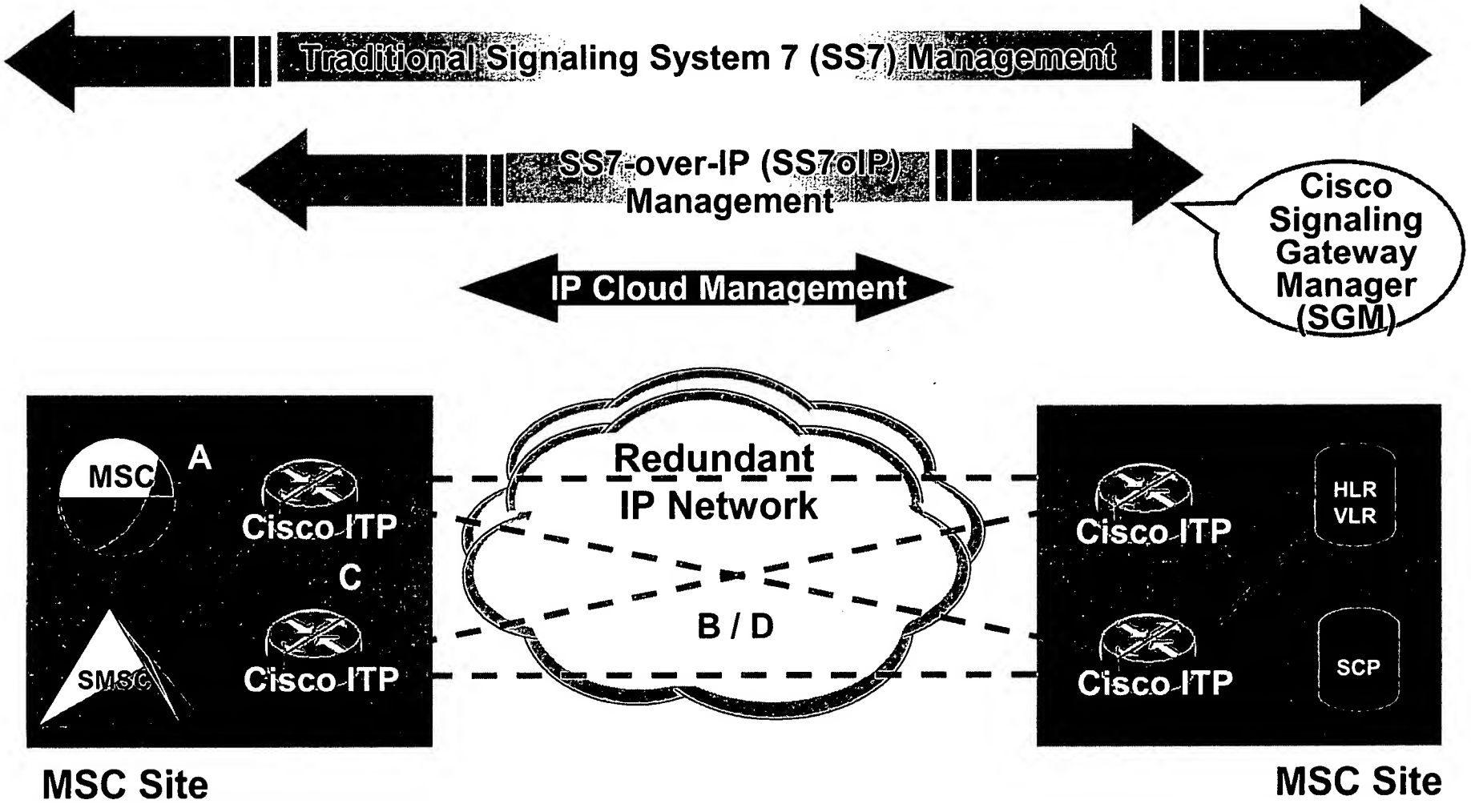
Cisco IP Transfer Point (ITP) Network Management Scope



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Cisco ITP Management Strategy

IP Cloud Management

- Take advantage of off-the-shelf tools for normal router management (CiscoWorks2000, IP Manager, and so on)

SS7oIP Management

- Use Cisco Signal Gateway Manager (SGM) to support Cisco ITP domain-network management
  - Auto-discovery with graphical topology map
  - Status monitoring and alerts, with drill-down analysis
  - Configuration of route and global title translation (GTT) tables
- Provide support for IETF standard and Cisco ITP Simple Network Management Protocol (SNMP) management Information bases (MIBs)

Traditional SS7 Management

- Partner with leading management vendors for end-to-end call trace, packet analysis, long-term trending and analysis

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Cisco SGM Product Definition

Cisco Signaling Gateway Manager (SGM) is a network-management software product that enables Cisco IP Transport Point (ITP) network with user-friendly administration to discover, manage, and troubleshoot SS7 traffic over IP (SS7oIP) networks, which enhances scalability while adding more sophisticated network management and control.

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Cisco Release 2.0 SGM Key Features

- Support Cisco ITP networks
- Router Discovery and SS7oIP topology map
- Statistics and status monitoring for SS7, SIGTRAN, IP, and so on
- Drill-down diagnostic applications
- User definable polling and events
- Destination point code (DPC) route table configuration
- Global title translation (GTT) table configuration
- Other Cisco and third-party network management products integration
- Log and display messages (into files on the server) with various types: State change, SNMP trap, errors, debug, and so on

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MIBs Supported in Cisco SGM Release 2.0

- Cisco specific MIBs:
  - resource, interface, and protocols MIBs
- Cisco ITP specific MIBs by product number:
  - CISCO-IETF-SCTP-MIB : SCTP and RFC 2960
  - CISCO-ITP-SP-MIB : SS7 variant, links, linksets, MTP
  - CISCO-ITP-SCCP-MIB : SCCP and GTT
  - CISCO-ITP-ACL-MIB : Screening
  - CISCO-ITP-ACT-MIB : Accounting
  - CISCO-ITP-RT-MIB : Route table
  - CISCO-ITP-TC-MIB : Common textual conventions, such as ANSI C typedef, for all of the MIBs listed above.
  - CISCO-SCCP-MIB : SCCP transport over SS7

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Cisco SGM System Characteristics

- 3-tier client server design with reliable message bus
- Standard protocol (SNMP)-based device communication
- Remote and easy-to-access client interface
- Direct CiscoView launch for graphical element management
- Direct CiscoWorks2000 launch for general Cisco IOS software router management
- High performance with multiple operators graphical user interface (GUI) support
- Self healing process management

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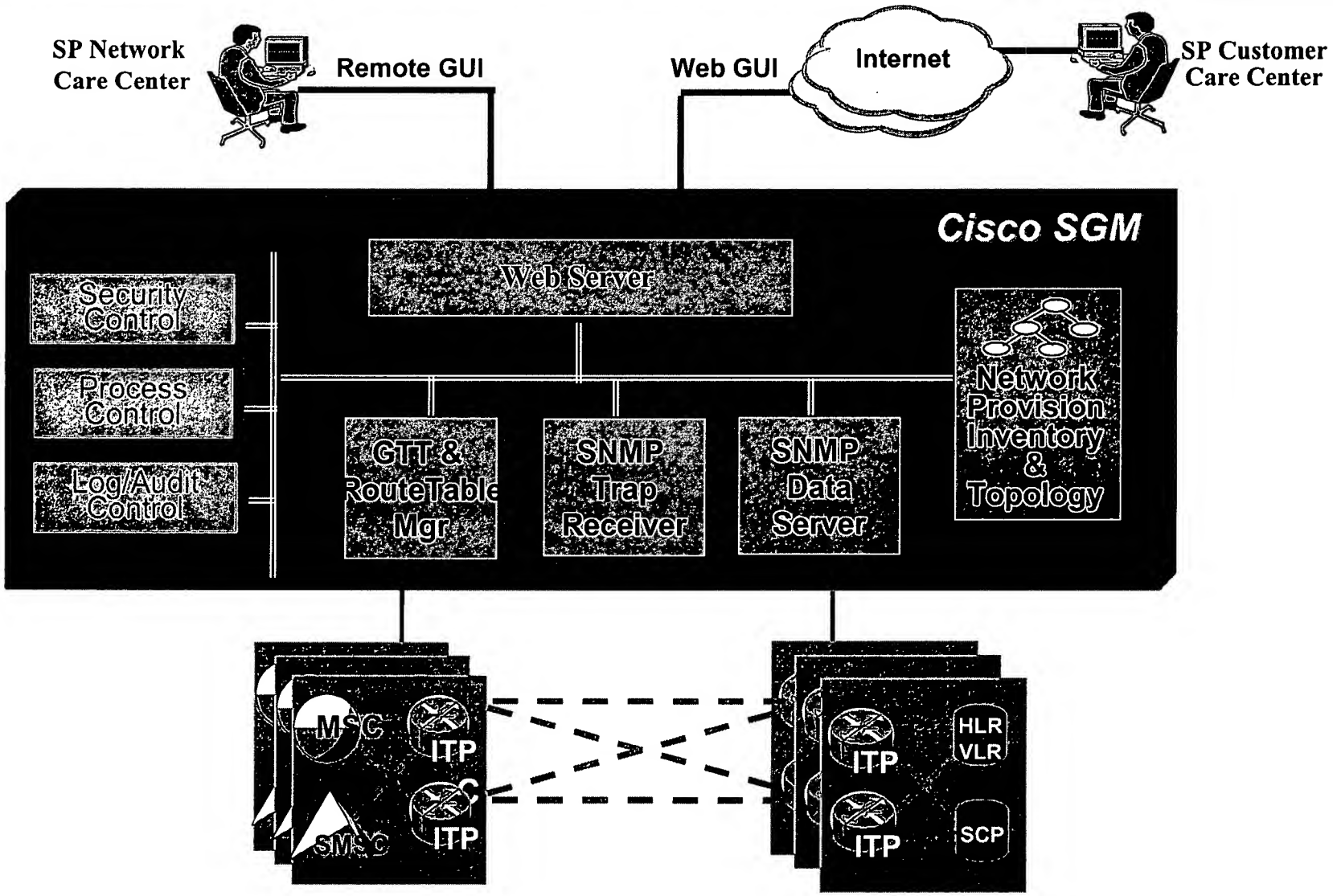
Cisco SGM System Functional View



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Cisco Release 2.0 SGM System Configuration

- **Server**
  - –Solaris 2.6, 2.7, 2.8
- **Client**
  - –Solaris 2.6, 2.7, 2.8
  - –Windows 2000 with Netscape Communicator 4.7 or Microsoft Internet Explorer 5.01 (or later)
- **Bundled Web Server:**
  - –No administration required
  - –Does not interfere with any existing Web server
- **HTML Browser Based Help System:**
  - –Refer to product manual for detailed system configuration

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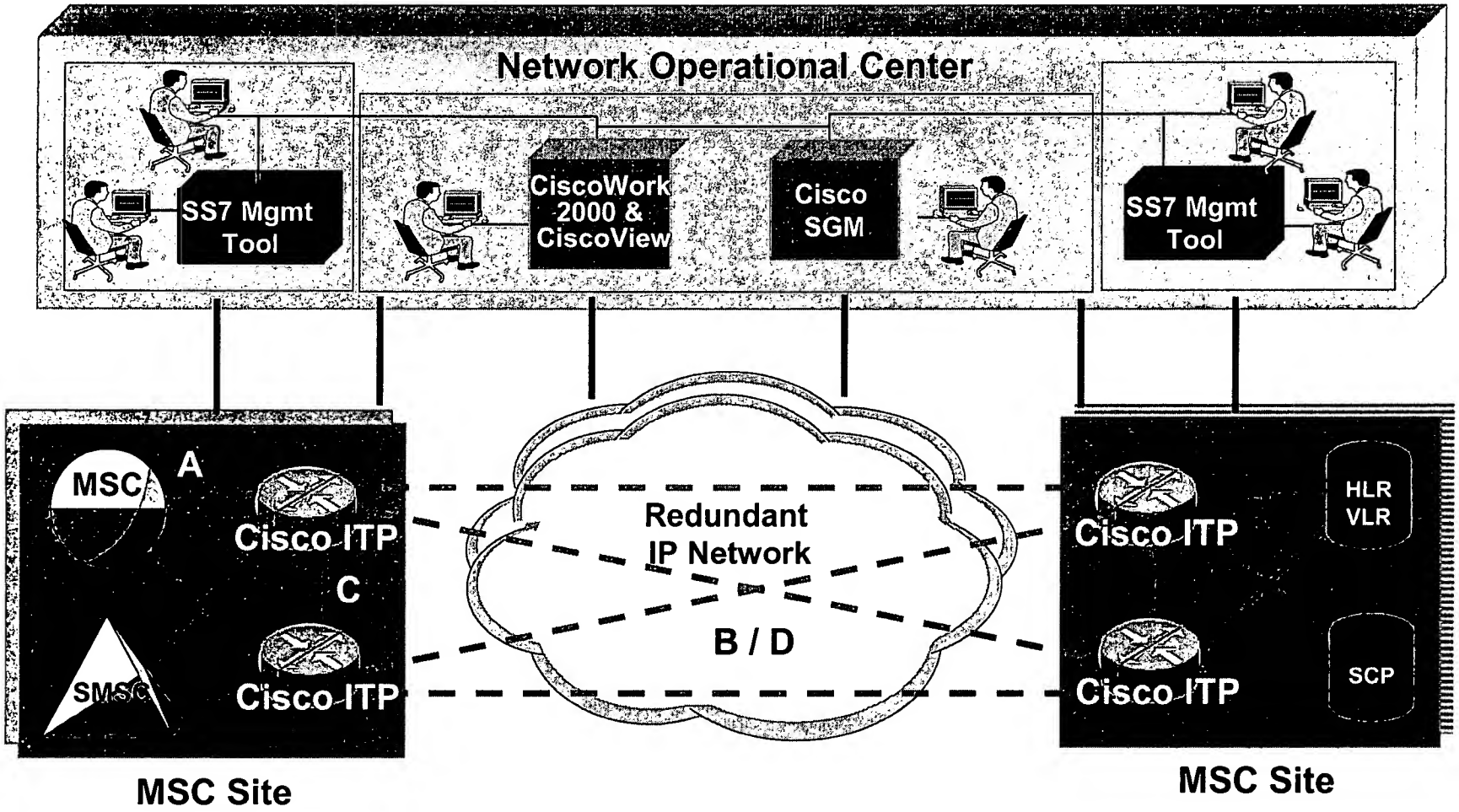
Cisco ITP Deployment Operational Environment

Example: Signaling Transfer Point (STP) Offload



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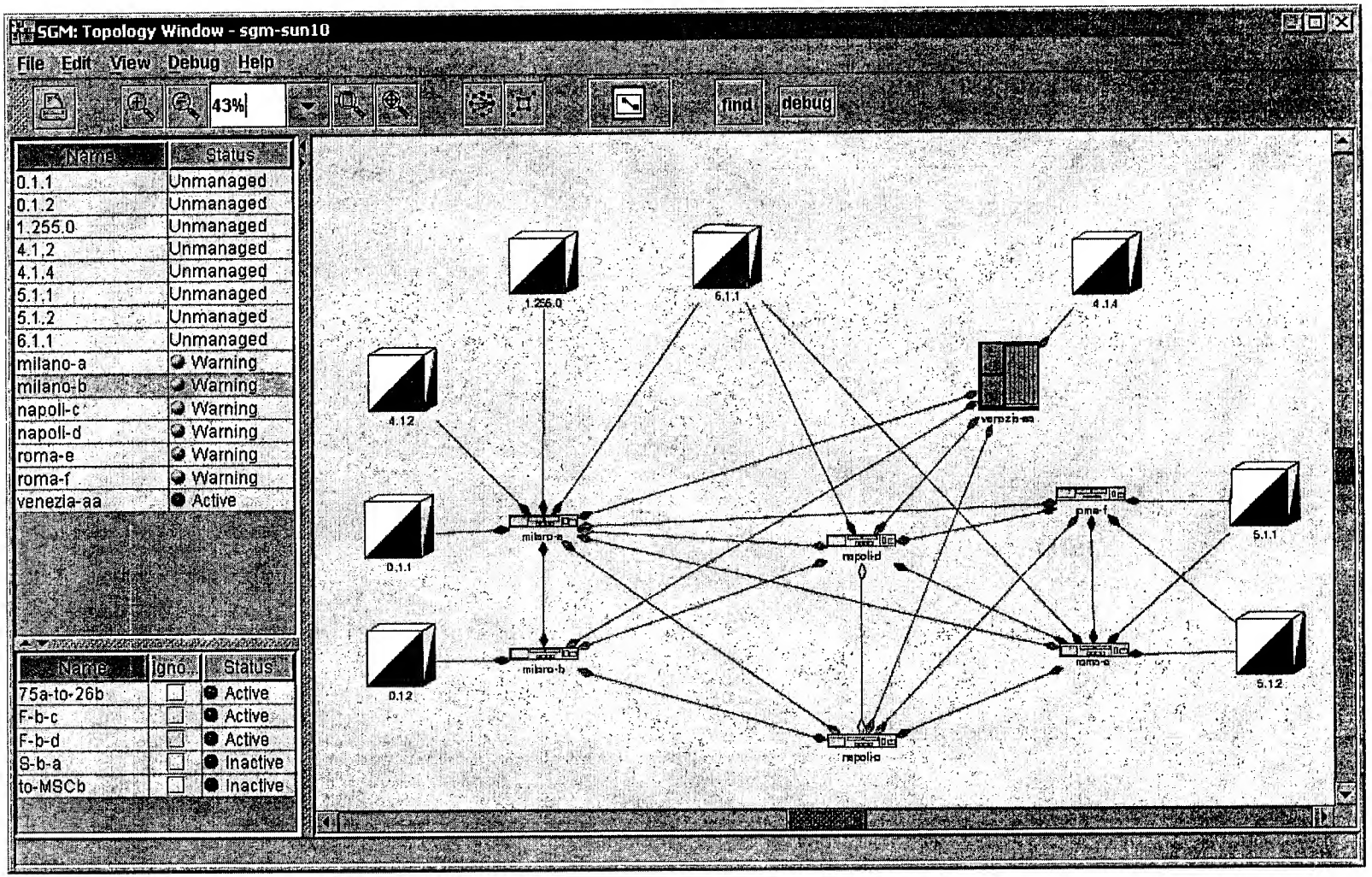
Cisco SGM 2.0 Topology



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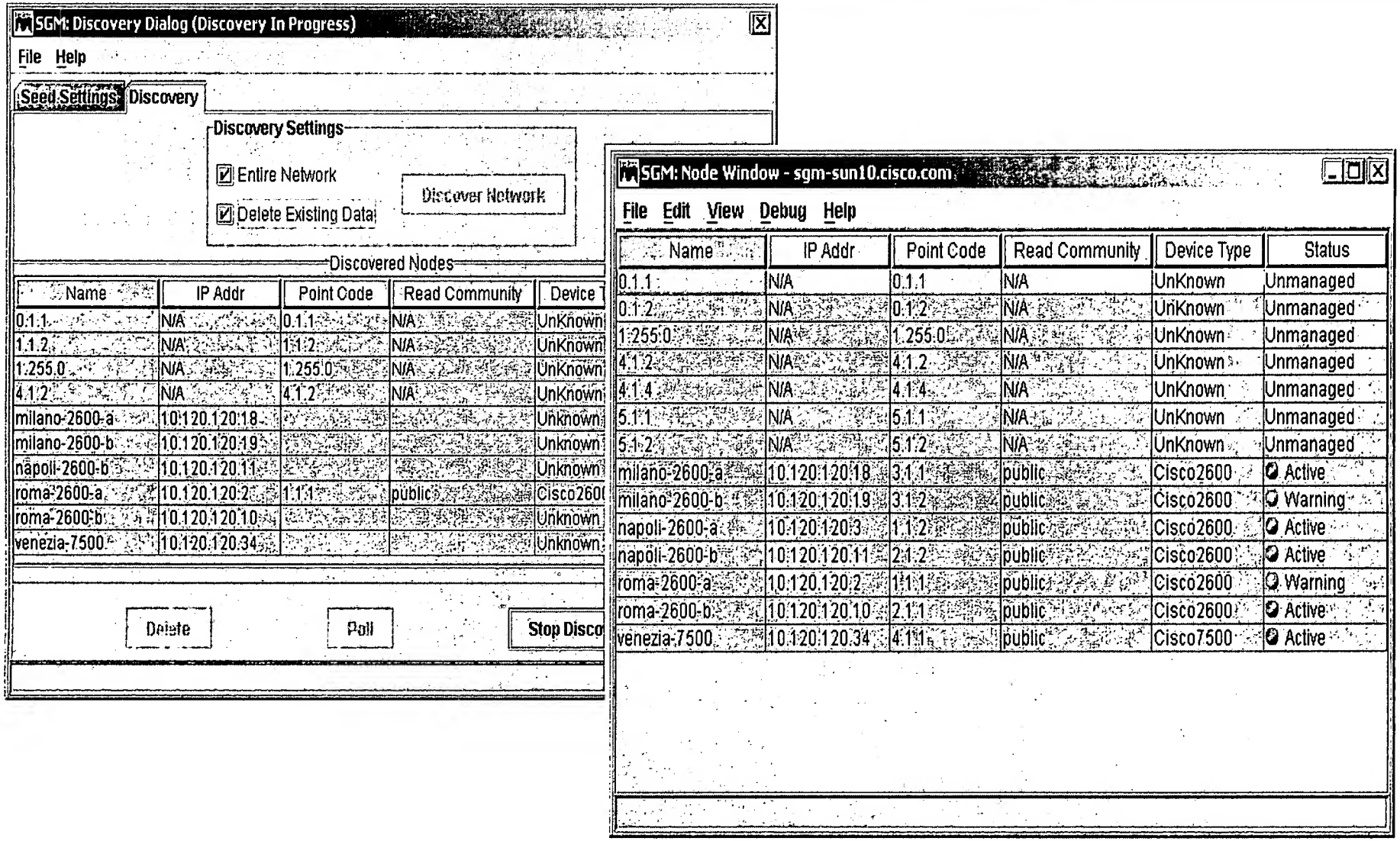
Cisco SGM 2.0 Discovery and Node Display



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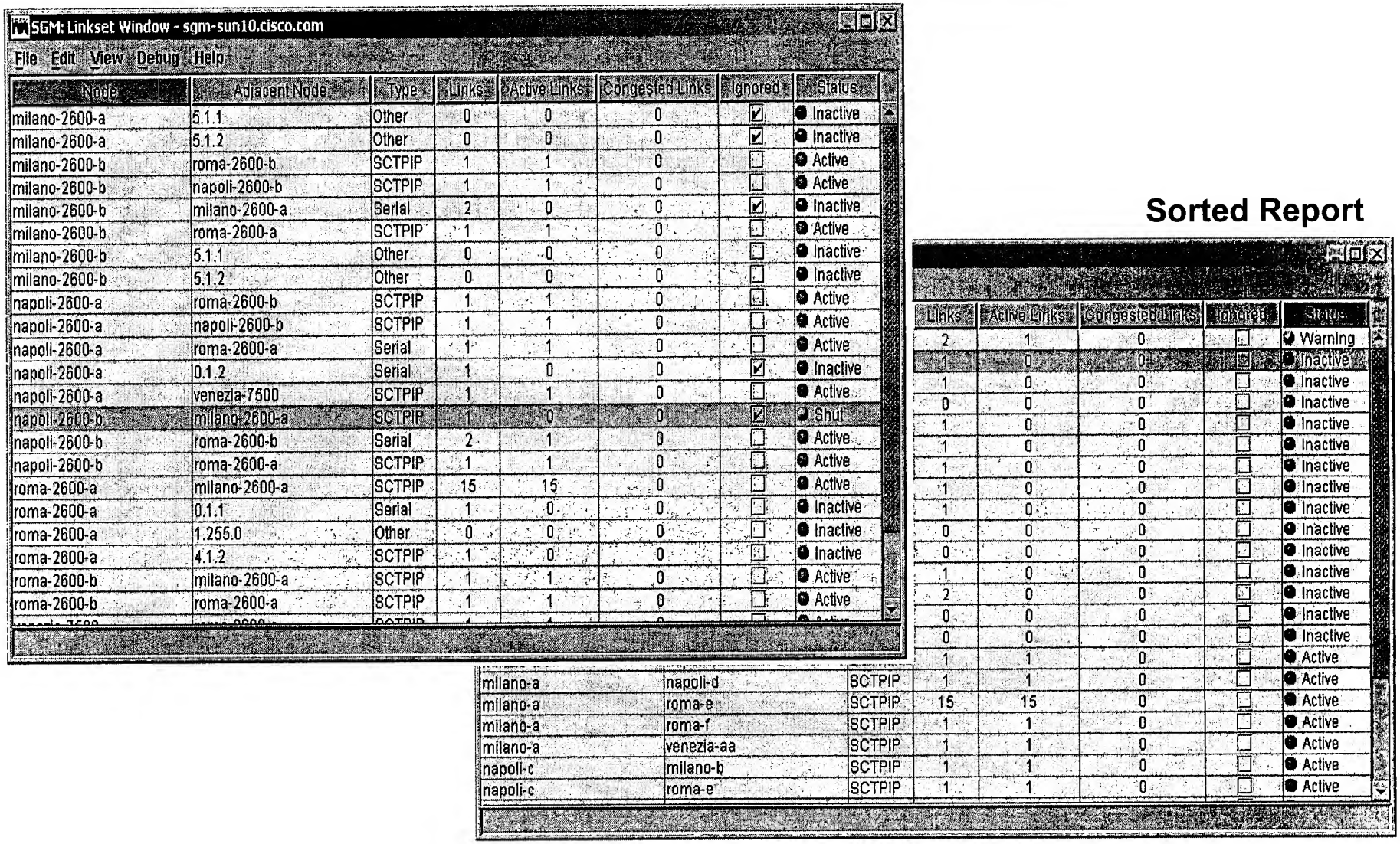
Cisco SGM 2.0 Linkset Monitoring

Cisco.com



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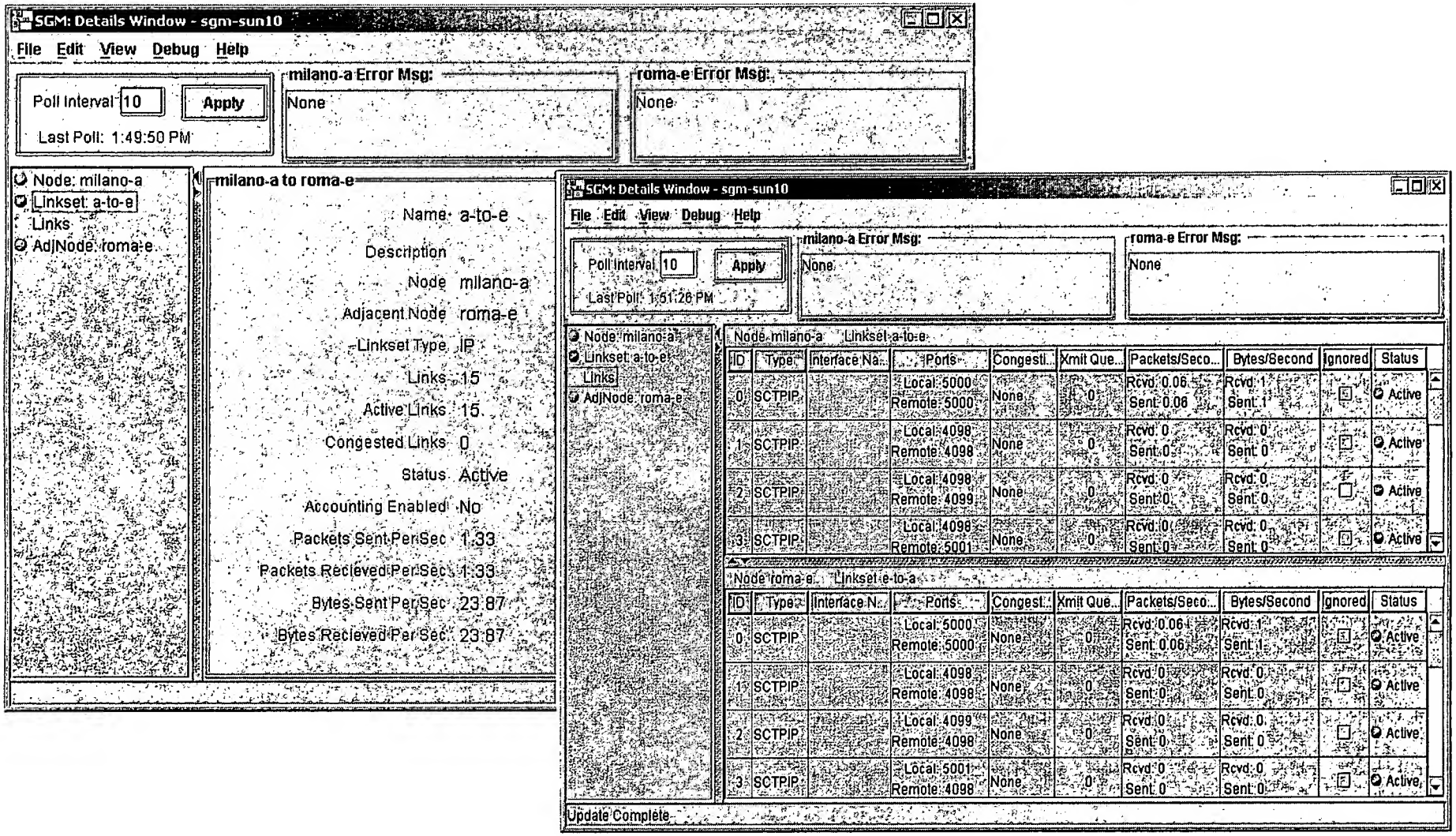
Cisco SGM 2.0 Linkset Details



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Cisco SGM 2.0 DPC Route Table Configuration

SGM: Route Table Dialog -- roma-2600-a

Destination Point Code	Destination Linkset	Mask	Cost
5.1.2	a-to-f	7.255.7	5
5.1.1	a-to-f	7.255.7	3
3.1.2	a-to-c	7.255.7	1
3.1.2	a-to-d	7.255.7	2
3.1.2	a-to-f	7.255.7	3
3.1.1	a-to-f	7.255.7	3
2.1.1	a-to-d	7.255.7	3
2.1.1	a-to-c	7.255.7	5

Save | Delete | Print | Cancel | Help

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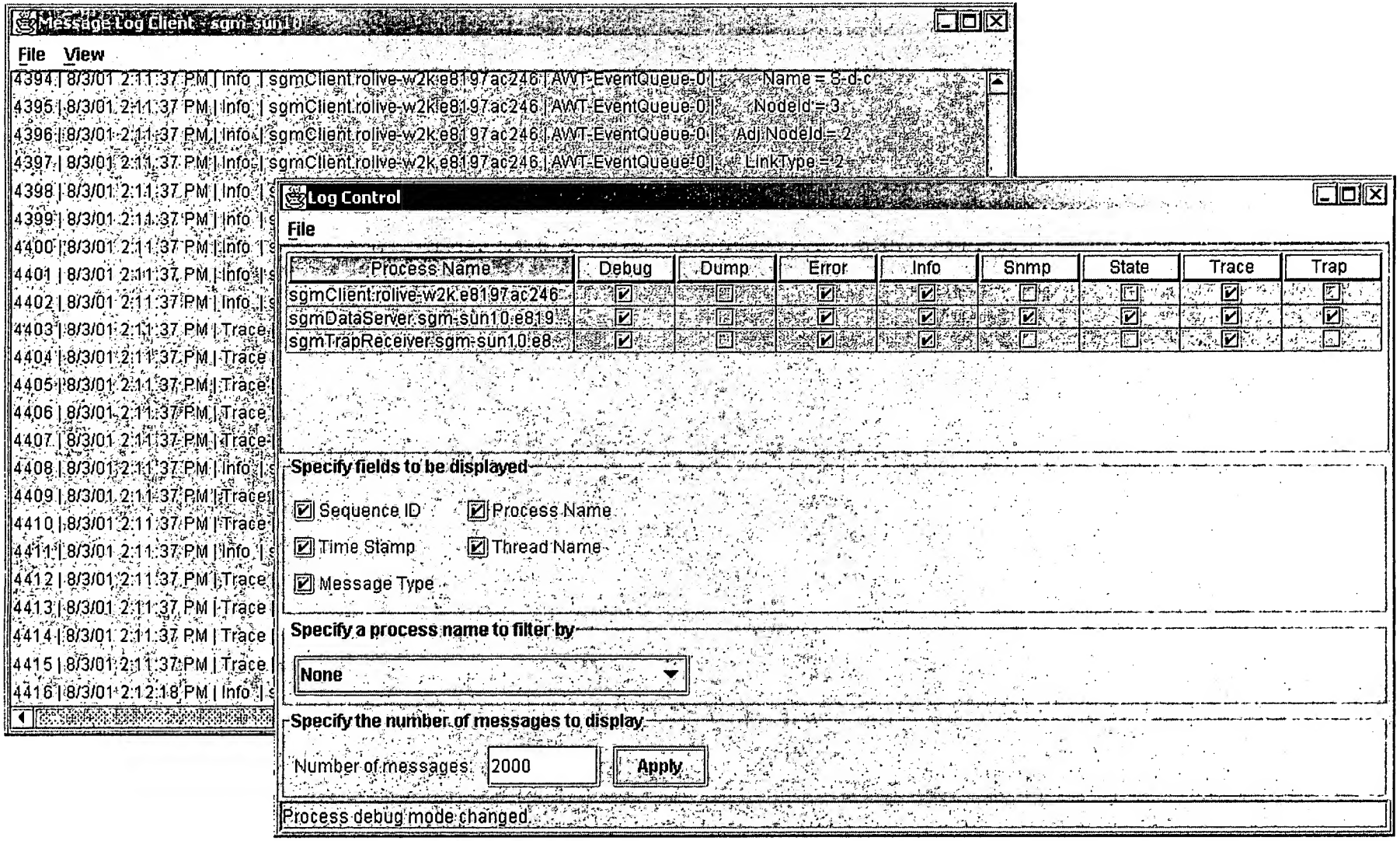
Cisco SGM 2.0 Message Log Control and Viewing



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Cisco Release 2.0 SGM Installation

- Simple menu-driven installation
- Solaris package and Windows InstallShield
- Express and custom installations
- Separate server and client installations
- Clients can be downloaded from server
  - Installed on client machines (Windows 2000 or Solaris)
- Clients can connect to any remote server

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Cisco SGM Summary

- Provides a smooth transition for management of an IP network for SS7 traffic

- Supports efficient deployment of SS7oIP traffic on Cisco ITP network

- Enables integration with other SS7 network management system (NMS) applications for reduced entry cost and a rich set of management applications from the beginning

- Reduces learning time for SS7 NMS personnel by providing a consistent SS7 mapping system for Cisco ITP networks

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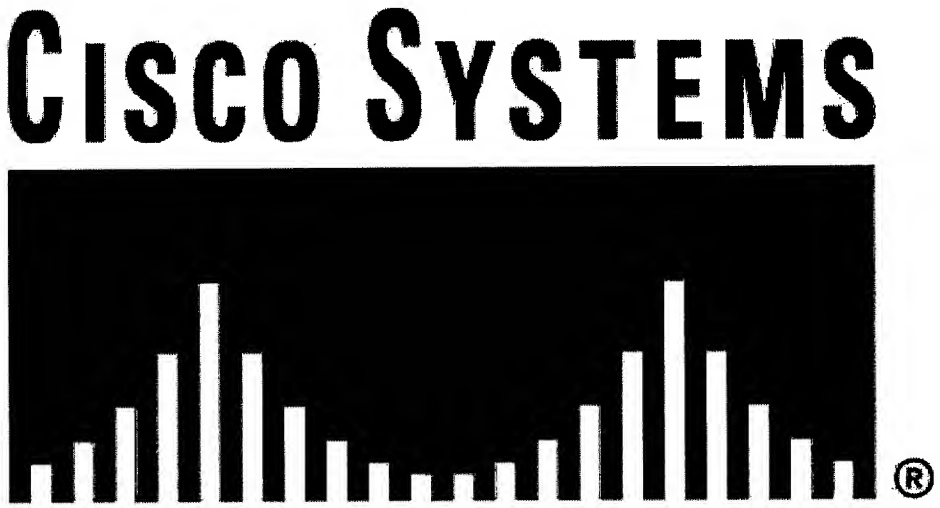

EMPOWERING THE
INTERNET GENERATION

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